

Amendments to the Claims:

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-17. (Canceled).

18. (Currently Amended) An externally mixing burner having a burner head, ~~at least one~~ a combustion gas tube and ~~at least one~~ a tube for an oxygen-containing gas, wherein the burner head has outlet openings out of the combustion gas tube and out of the tube for the oxygen-containing gas,

wherein gas inlet lines are provided for a combustion gas and for the oxygen-containing gas, each of the gas inlet lines being connected respectively to a source for combustion gas and to a source for oxygen-containing gas, and

wherein ~~at least one~~ of the gas inlet line lines ~~connected to one of the~~ ~~combustion gas source and the oxygen-containing gas source~~ opens eccentrically into a swirl chamber arranged between the gas inlet line and one of the corresponding ~~one of the~~ combustion gas tube and the tube for oxygen-containing gas;

~~at least~~ the one of the gas inlet lines opening in the swirl chamber being divided into first and second lines upstream of the ~~at least one~~ swirl chamber, wherein the first line opens eccentrically into the ~~at least one~~ swirl chamber and the second line opens directly into a respective one of the combustion gas tube and the tube for oxygen-containing gas,

a control unit being provided to control valves disposed in divided portions of the gas inlet lines, to control a degree of opening of the valves to vary a desired shape of a flame of the burner by selecting a quantity of combustion gas and a quantity of oxygen-containing gas being directed in the ~~at least one~~ swirl chamber.

19 - 20. (Canceled)

21. (Previously Presented) The burner according to Claim 18, wherein the valves are solenoid valves.

22. (Previously Presented) The burner according to Claim 18, wherein the swirl chamber has a circular cross-section in a section perpendicular to a longitudinal axis of the combustion gas tube.

23. (Previously Presented) The burner according to Claim 18, wherein the gas inlet line opens tangentially into the swirl chamber.

24. (Previously Presented) A method for operating an externally mixing burner having at least one combustion gas tube and at least one tube for oxygen-containing gas, through which combustion gas and oxygen-containing gas respectively flow to a burner head, comprising the acts of:

introducing at least one of the combustion gas and the oxygen-containing gas eccentrically into a swirl chamber in which a swirl flow is impressed thereto;

supplying the at least one of the combustion gas and oxygen-containing gas to the respective combustion gas tube and the tube for oxygen-containing gas after leaving the swirl chamber; and

controlling with a regulating unit a quantity of combustion gas and oxygen-containing gas supplied to the burner per unit of time through the swirl chamber, and a quantity of combustion gas and oxygen-containing gas bypassing the swirl chamber, by controlling a degree of opening of valves regulating flow of the combustion gas and of the oxygen-containing gas, to adjust a desired shape of the flame by selecting a quantity of at least one of combustion gas and oxygen-containing gas being directed through the corresponding swirl chamber.

25. (Canceled)

26. (Previously Presented) The method according to Claim 24, wherein the oxygen-containing gas is air.

27. (Previously Presented) The method according to Claim 24, wherein the oxygen-containing gas is oxygen-enriched air.

28. (Previously Presented) The method according to Claim 24, wherein the oxygen-containing gas is a gas having an oxygen content greater than an oxygen content of air.

29. (Previously Presented) The method according to Claim 24, wherein the oxygen-containing gas is a gas having an oxygen content greater than 70 % by volume.

30. (Previously Presented) The method according to Claim 24, further comprising impressing the swirl flow upon a flow of the combustion gas.

31. (Previously Presented) The method according to Claim 24, further comprising impressing the swirl flow upon a flow of the oxygen-containing gas.

32. (Previously Presented) The method according to Claim 24, further comprising impressing co-rotating swirl flows upon a flow of the combustion gas and a flow of the oxygen-containing gas.

33. (Previously Presented) The method according to Claim 24, further comprising impressing contra-rotating swirl flows upon a flow of the combustion gas and a flow of the oxygen-containing gas.

34. (Previously Presented) The burner according to Claim 18, further comprising utilizing the burner to melt one of metal and glass.

35. (Previously Presented) A burner, comprising:

a combustion gas tube;

a first gas inlet line coupled to the combustion gas tube;

an oxygen-containing gas tube;

a second gas inlet line coupled to the oxygen-containing gas tube; and

a at least one swirl chamber, disposed between one of the first gas inlet line and the combustion gas tube, and the second gas inlet line and the oxygen-containing gas tube

a first portion of the first gas inlet line being coupled to the combustion gas tube, a first portion of the second gas inlet line being coupled to the oxygen-containing gas tube, and a second portion of at least one of the first gas inlet line and second gas inlet line being coupled to the at least one swirl chamber,

wherein a flow of gas is controlled from the first and second portions of the first and second gas inlet lines to achieve a desired flame shape by selecting one of a quantity of the combustion gas and a quantity of the oxygen-containing gas to be directed through the at least one swirl chamber.

36. (Canceled)

37. (Previously Presented) A method for operating a burner, comprising the steps of:

controlling a flow of a combustion gas to a combustion gas tube;

controlling a flow of an oxygen-containing gas to an oxygen-containing gas tube;

swirling at least one of the combustion gas and the oxygen-containing gas in a swirl chamber;

supplying the combustion gas and the oxygen-containing gas to the burner; and

adjusting a desired shape of a flame by selecting a quantity of combustion gas and a quantity of oxygen-containing gas being directed through the swirl chamber.

38. (Previously Presented) The method according to Claim 37, wherein the steps of controlling the flow of the combustion gas and the oxygen-containing gas include the step of operating a valve.

39. (New) The externally mixing burner according to claim 18, further comprising a second swirl chamber into which opens the other of the gas inlet lines.